

# STRUCTURAL DESIGN

# ENCLOSED BUILDING EXPOSURE B

# MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT- BOX EAVE FRAME AND BOW FRAME

29 July 2021 Revision 6 M&A Project No. 16022S/17300S/20352S

Prepared for:

Tubular Building Systems, LLC 631 SE Industrial Circle Lake City, Florida 32025

Prepared by:

Moore and Associates Engineering and Consulting, Inc. 1009 East Avenue North Augusta, SC 29841

> 401 S. Main Street, Suite 200 Mount Airy, NC 27030

Wayne Digitally signed by Wayne S Moore Date: 2022.09.12





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            FLOOD VENT DETAIL
            STAND-ALONE STEM WALL DETAIL
            VERTICAL SLIDING WINDOW DETAIL
            SIRIP FOOTING OPTION
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ENGINEERING AND CONSULTING, INC.	CHECKED BY: PDH		30'-0"x20'-0" ENCLOSED BUILDING EXP. B		
	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16022S/ 17300S/20352S	
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#### INSTALLATION NOTES AND SPECIFICATIONS

- 1 DESIGN IS FOR A MAXIMUM 30'-0' WIDE x 20'-0' EAVE HEIGHT ENCLOSED STRUCTURES
- 2 DESIGN WAS DUNE IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CUDE (FBC) 7TH EDITION, 2012 INTERNATIONAL BUILDING CODE (IBC), 2015 IBC AND 2018 IBC
- 3 DESIGN LOADS ARE AS FOLLOWS:
  A) DEAD LOAD = 15 PSF
  B) LIVE LOAD = 12 PSF
  C) GROUND SNOW LOAD = 10 PSF
- 4 LOW ULTIMATE WIND SPEED 105 TO 143 MPH (NOMINAL WIND SPEED 81 TO 108 MPH) MAXIMUM RAFTER/POST AND END POST SPACING = 50 FEET
- 5 HIGH ULTIMATE WIND SPEED 141 FD 170 MPH (NOMINAL WIND SPEED 109 TO 132 MPH). MAXIMUM RAFTER/POST AND END POST SPACING = 40 FEET
- 6 END WALL COLUMNS (POSTS) AND SIDE WALL COLUMNS ARE EQUIVALENT IN SIZE AND SPACING (UNLESS NOTE) OTHERWIST)
- 7 RISK CATEGORY I
- 5 WIND EXPOSURE CATEGORY B
- 9 SPECIFICATIONS APPLICABLE TO 29 GAUGE METAL PANELS FASTENED DIRECTLY TO 2 1/2" x 2 1/2" 14 GAUGE TUBE STEEL (TS) FRAMING MEMBERS FOR VERTICAL PANELS 39 GAUGE METAL PANELS SHALL BE FASTENED TO 18 GAUGE HAT CHANNELS (UNLESS OTHERWISE NOTED)
- IN AVERAGE FASTERER SPACING DN-CENTERS ALDING RAFTERS OR PURLINS AND POSTS INTERIOR = 9° OR END = 6° (MAX)
- 11 FASTENERS CONSIST OF #12-14x3/4\* SELF-DRILLING FASTENER (SDF), USE CONTROL SEAL WASHER WITH EXTERIOR FASTENERS
  SPECIFICATIONS APPLICABLE ONLY FOR MEAN ROOF HEIGHT OF 20 FEET OR LESS, AND ROOF SLOPES OF 14\* C3/2 PITCHO OR LESS
  SPACING REQUIREMENTS FOR OTHER ROOF HEIGHTS AND/OR SLOPES MAY MARY ROOF SLOPES LESS THAN 3/2 REQUIRE USE OF JOINT SEALANT
- 12 STANDARD ANCHORS SHALL BE INSTALLED THROUGH BASE RAIL WITHIN 5' OF EACH COLUMN
- 13 STANDARD CROWNS ANCHORS (SUIL NAILS) CONSIST OF #4 REBAR W/WELDED NUT x 30" LING IN SUITABLE SUIL CONDITIONS MAY BE USED FOR LOW ( & 138 MPH NOMINAL) WIND SPEEDS ONLY DETIONAL ANCHORAGE MAY BE USED IN SUITABLE SUILS AND MUST BE USED IN LANGUITABLE SUILS AS NOTED COORDINATE WITH LOCAL CODES/ORDINANCES RECARDING MINIMUM LENGTH FOR FROST DEPTH PROTECTION.
- 14 WIND FORCES SOVERN OVER SEISMIC FORCES SEISMIC PARAMETERS ANALYZED ARE

SOIL SITE DLASS = D RISK DATEGORY I

R= 325 I<sub>E</sub>= 10

S<sub>55</sub>= 1588 g V= D<sub>5</sub>W

Spi= 1835 g



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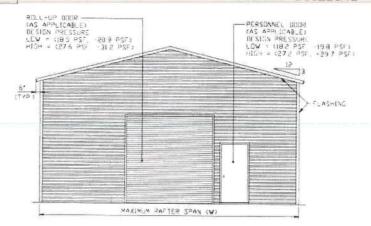
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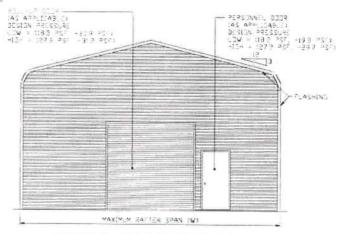
## BOX EAVE FRAME RAFTER ENCLOSED BUILDING



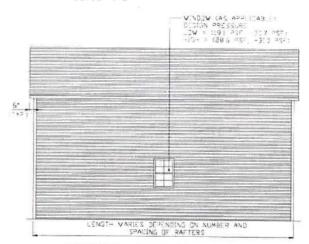
### TYPICAL END ELEVATION

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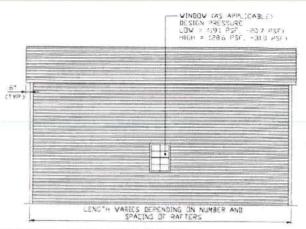
## BOW FRAME RAFTER ENCLOSED BUILDING



## TYPICAL END ELEVATION



TYPICAL SIDE ELEVATION



TYPICAL SIDE ELEVATION



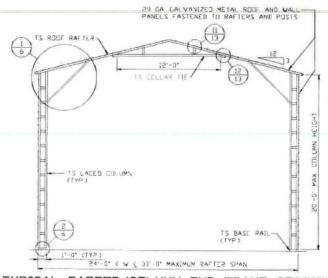
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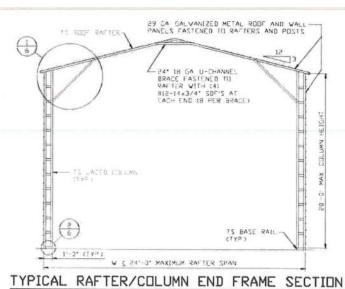
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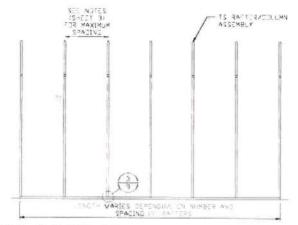
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TYPICAL RAFTER/COLUMN END FRAME SECTION

SCALE NTS

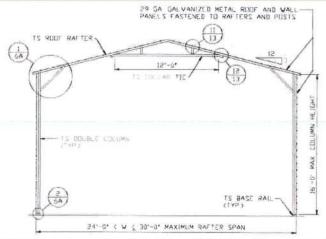


TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

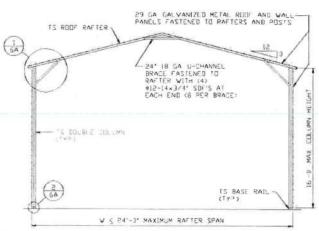


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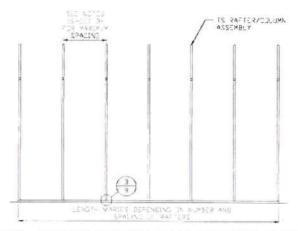
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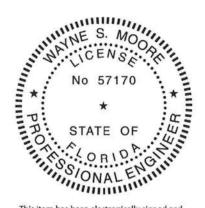
TYPICAL RAFTER/COLUMN END FRAME SECTION



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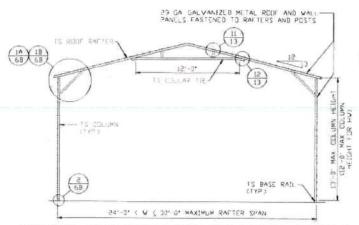


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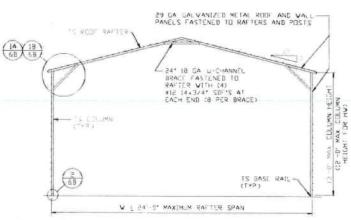


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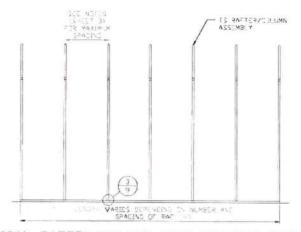
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TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

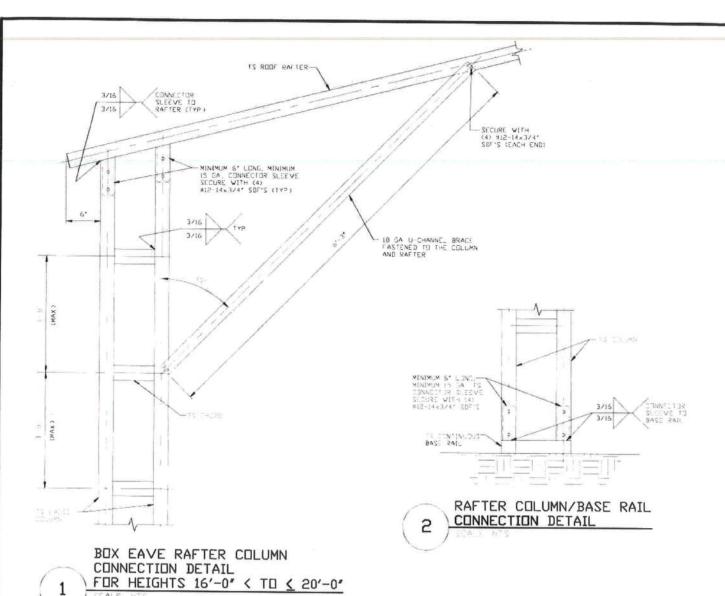


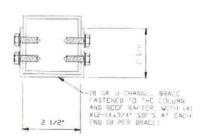
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BRACE SECTION



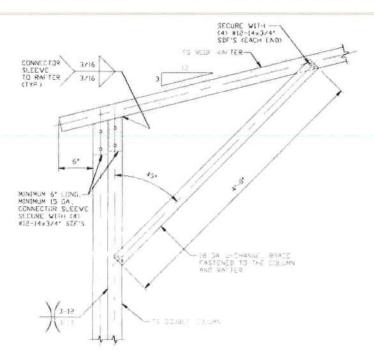
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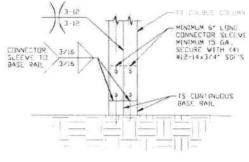
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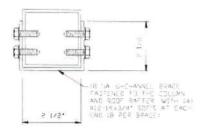


BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 13'-0" < TO ≤ 16'-0"

VETE COLUMN HEIGHTS 12'-3" ( TO & 15'-3" FOR HISH WIND



2 RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE NIS



BRACE SECTION

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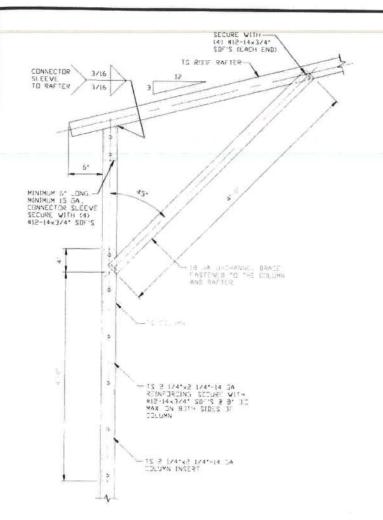


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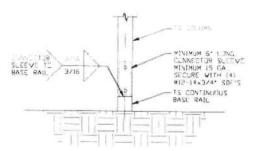
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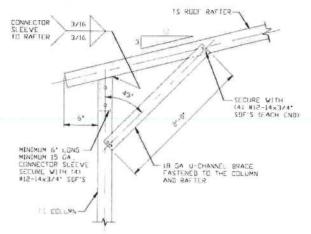
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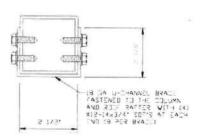
BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0" < TO & 13'-0"



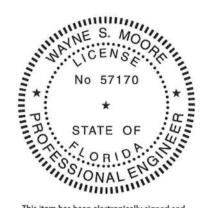
RAFTER COLUMN/BASE RAIL
CONNECTION DETAIL
SCALE NIS



BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS & 10'-0"



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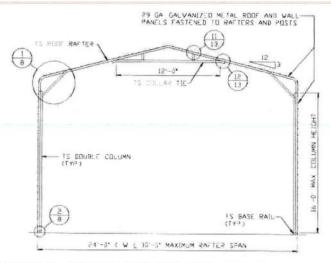
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24' IB GA U-CHANNEL
BRACE FASTENED TU
RAFTER WITH (4)
BRIZ-14374' SDF'S AT
EACH END (8 PER BRACE)

15 BOUBLE COLUMN

TS BASE RAIL

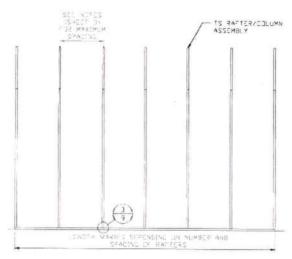
Y 124'-0' MAXIMUM RAFTER SPAN

TS ROOF RAFTER-

29 GA GALVANIZED METAL ROOF AND WALL PANELS FASTENED TO RAFTERS AND POSTS

## TYPICAL RAFTER/COLUMN END FRAME SECTION

TYPICAL RAFTER/COLUMN END FRAME SECTION



TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

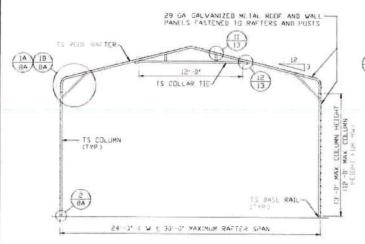


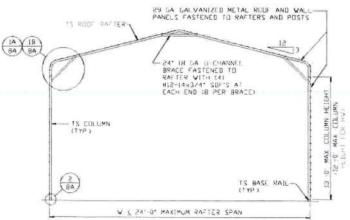
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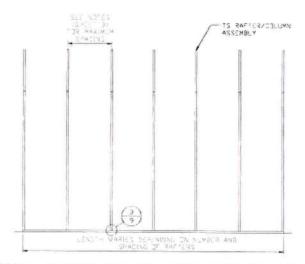
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TYPICAL RAFTER/COLUMN END FRAME SECTION

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TYPICAL RAFTER/COLUMN SIDE FRAMING SECTION

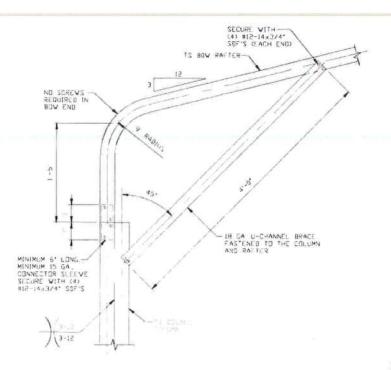


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3-12

MINIMUM 6\* LONG,
CONNECTOR SLEEVE
MINIMUM 13 GA
SECURE WITH (4)
BOSE RAIL

FS. CONTINUOUS
BASE RAIL

RAFTER COLUMN/BASE RAIL

CONNECTION DETAIL

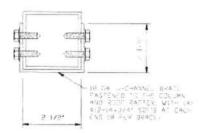
2

BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 13'-0" < TO <u>⟨</u> 16'-0"

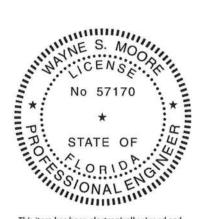
SCALE NTS

1

NOTE COLUMN HEIGHTS 18'-3" ( TO & 16'-3" FOR HIGH WIND



BRACE SECTION



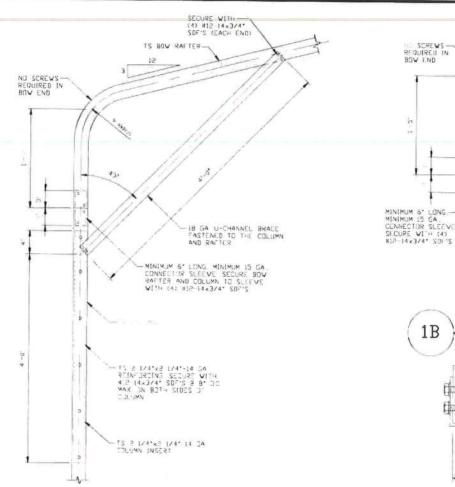
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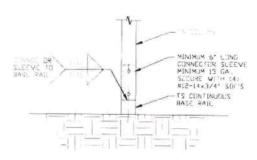
DRAWN BY: JG CHECKED BY: PDH	63 L/	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B			
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 16022S/ 17300S/20352S		
CLIENT: TBS	SHT. 8	DWG, NO SK-3	REV. 6		



BRACE SECTION

BOX EAVE RAFTER COLUMN CONNECTION DETAIL FOR HEIGHTS 10'-0" < TO ≤ 13'-0"

MAXIMUM COLUMN HEIGHT IS 12'-0' FOR HIGH WIND



1A

RAFTER COLUMN/BASE RAIL CONNECTION DETAIL 2



TS BOY PAFTER

18 GA U-CHANNEL BRACE FASTENED TO THE COLUMN AND RAFTER

BOX EAVE RAFTER COLUMN

18 DA UHTHANNEL BRACE PASTEMED TO THE COLUMN AND ROOF RAFTER WITH (4) BRE-1443/4' SUPS AT EACH END (8 PER BRACE)

CONNECTION DETAIL FOR HEIGHTS ≤ 10'-0"

TS COLUMN

5 115.

SECURE WITH (4) #18-14x3/4' SDF'S (EACH END)

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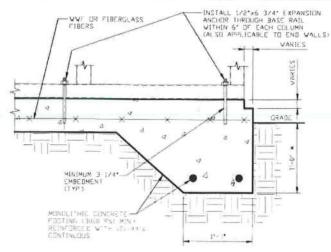
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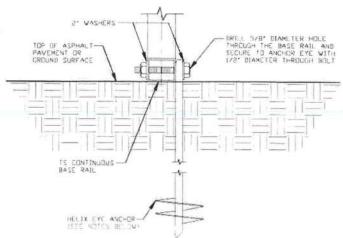
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CLIENT: TBS	SHT. BA	DWG. NO: SK-3	REV. 6		
PROJECT MGR: VSM	DATE: 7-29-21	SCALE: NTS	JDB ND: 160225/ 173005/203525		
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
DRAWN BYI JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE				

# BASE RAIL ANCHORAGE OPTIONS FOR LOW AND HIGH WIND SPEED





3A

#### CONCRETE MONOLITHIC SLAB BASE RAIL ANCHURAGE

MINIMUM ANCHOR EDGE DISTANCE IS 4" \* COURDINGTE WITH LOCAL CODESYARD REGARDING MINIMUM FROST DEPTH REC **3B** 

#### GROUND BASE HELIX ANCHORAGE

CAN BE USED FOR ASPHALT) \* SCERDINATE WITH LOCAL SEDESZERD REGARDING MINIMUM FREST DEPTH REQ

#### **GENERAL NOTES**

NUTE: CONCRETE MONOLITHIC SLAB DESIGN ON MINIMUM SOIL BEARING CAPACITY OF 1500 PSF

#### CONCRETE

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3.000 PSI AT 28 DAYS

#### COVER OVER REINFORCING STEEL!

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACT 318
3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND 1 1/2 INCHES ELSEWHERE

#### REINFORCING STEEL

THE FURNDOWN REINFORCING STEEL SHALL BE ASTM AGES GRADE 50 THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM ALBS OR FIBERGLASS FIBER REINFORCEMENT

#### REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED:

- 1 REINFORCEMENT IS BENT COLD
  2 THE DIAMETER OF THE BEND MEASURED ON THE INSIDE OF THE BAR. IS NOT LESS THAN SIX-BAR DIAMETERS
  3 REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT
- BE FIFI D BENT

#### HELIX ANCHOR NOTES

- FOR VERY DENSE AND/OR CEMENTED SANDS COARSE GRAVEL AND COBBLES, CALICHE PRELOADED SILTS AND CLAYS USE MINIMUM (2) 4' HELICES WI'H MINIMUM 30 INCH EMBEDMENT
- 2 FOR CORAL USE MINIMUM (2) 4' HELICES WITH MINIMUM 30 INCH EMBERMENT
- 3 FUR MEDIUM DENSE COARSE SANDS, SANDY GRAVELS VERY STIFF SILTS, AND CLAYS USE MINIMUM (2) 4° HELICES WITH MINIMUM 30 INCH EMBEDMENT
- 4 FOR LUNISE TO MEDIUM DENSE SANDS, FIRM TO STIFF CLAYS AND SILTS ALLUVIAL FILL USE MINIMUM (2) 6' HELICES WITH MINIMUM SO INCH EMBEDMENT
- 5 FOR VERY LOSE TO MEDIUM DENSE SANDS, FIRM TO STIFFER CLAYS AND STITS, ALLUVIAL FILL USE MINIMUM (2) 8' HELICES WITH MINIMUM 60 INCH EMBEDMENT



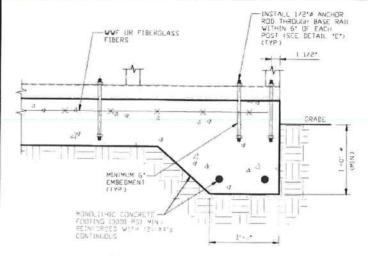
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# OPTIONAL FOUNDATION ANCHORAGE FOR LOW AND HIGH WIND SPEED



30

#### CONCRETE MONOLITHIC SLAB BASE RAIL ANCHURAGE

MINIMUM ANCHOR EDGE DISTANCE IS I LZE\*
\* COORDINATE WITH LEGAL CODESYORD
REGARDING MINIMUM ERBS! DEPTH REC

#### **GENERAL NOTES**

NOTE CONCRETE MONOLITHIC SLAB DESIGN ON MINIMUM SOIL BEARING CAPACITY OF 1,500 PSF

#### CONCRETE

CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3,000 PSI AT 29 DAYS

#### COVER OVER REINFORCING STEEL!

FOR FOUNDATIONS, MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACI-318
3 INCHES IN FOUNDATIONS WHERE THE CONCRETE IS CASI AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND I 1/2 INCHES ELSEWHERE

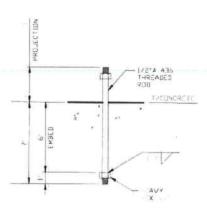
#### REINFORCING STEEL

THE TURNDOWN REINFORCING STEEL SHALL BE ASTM AGIS GRADE 60 THE SLAB REINFORCEMENT SHALL BE WELDED WIRE FABRIC MEETING ASTM AGS OR FIGERGLASS FIBER REINFORCEMENT

#### REINFORCEMENT MAY BE BENT IN THE SHOP OR THE FIELD PROVIDED

REINFORCEMENT IS BENT COLD

THE DIAMETER OF THE BEND MEASURED ON THE INSIDE OF THE BAR, IS NOT LESS THAN SIX-BAR DIAMETERS
REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT



ANCHOR ROD THROUGH BASE RAIL DETAIL 3D



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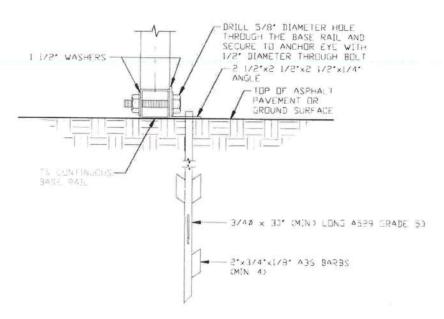
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DRAWN BY: JG	TUBULAR BUILDING SYSTEMS 631 SE INDUSTRIAL CIRCLE				

## BASE RAIL ANCHORAGE OPTION



3E ASPHALT BASE ANCHORAGE (HP 9 BARBED DRIVE ANCHOR)

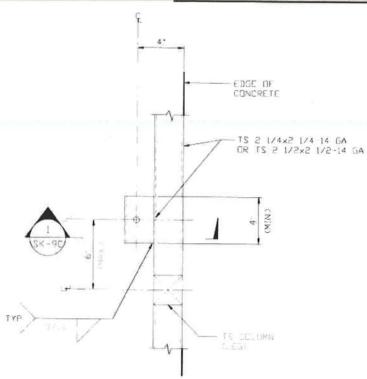
COAN BE USED FOR ASPHALT)
\* CORRUNATE WITH LOCAL CODES/ORD
REGARDING MINIMUM FROST DEPTH REC

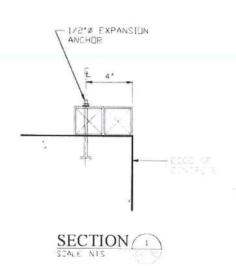


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# **BASE RAIL ANCHORAGE OPTIONS**





TYPICAL ANCHOR DETAIL WHEN BASE RAIL IS NEAR EDGE OF CONCRETE



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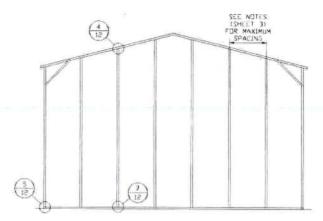
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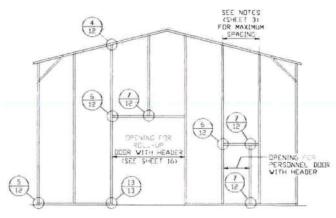
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CLIENT: TBS	SHT. 9C	DWG. NEI SK-3		REV. 6	

## **BOX EAVE RAFTER END WALL AND SIDE WALL OPENINGS**

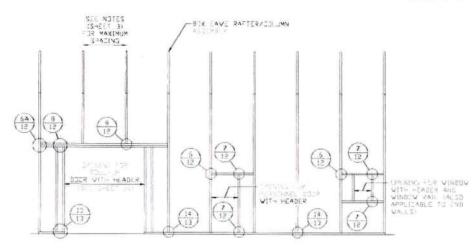


TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION



TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE NIS



TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION



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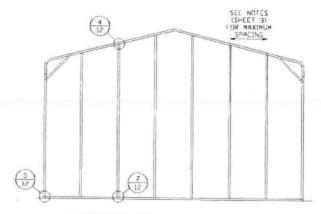
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	CHECKED BY: PDH	30'-0"x20'	30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
_	PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JOB NO: 160225/ 173005/203525			
	CLIENT: TBS	SHT. 10	DWG. NO SK-3	REV. 6			

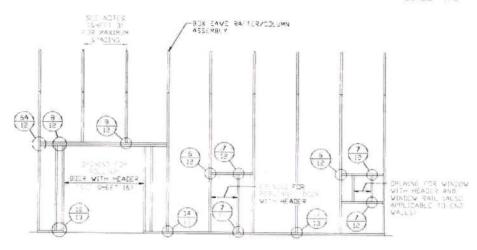
# BOW RAFTER END WALL AND SIDE WALL OPENINGS



TYPICAL BOX EAVE RAFTER END WALL FRAMING SECTION

TYPICAL BOX EAVE RAFTER END WALL OPENINGS FRAMING SECTION

SCALE: NTS



TYPICAL BOX EAVE RAFTER SIDE WALL OPENINGS FRAMING SECTION

SCALE NTS



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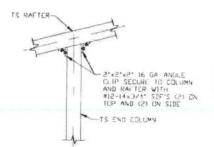
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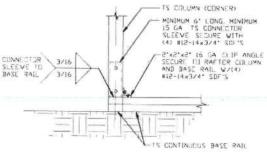
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CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B

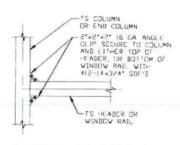
PROJECT MGRI WSM DATE: 7-29-21 SCALE: NTS JDB ND: 160225/
173005/203525

CLIENT: TBS SHT. 11 DWG. ND: SK-3 REV.: 6

### CONNECTION DETAILS



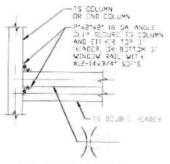




END COLUMN/RAFTER CONNECTION DETAIL 4

END COLUMN/BASE RAIL CONNECTION DETAIL 5

HEADER OR WINDOW RAIL TO COLUMN CONNECTION DETAIL 6



DOUBLE HEADER TO COLUMN CONNECTION DETAIL

IS TRUSSED RAFTER CHORD OR HEADER SYSTEM AND ISSUED AND ISSUED IN SIDE.

SATISFE CHURBYSAIL

OLIP SICURE TO COLUMN

SATISFE CHURBYSAIL

OLIP SICURE TO COLUMN

SYSTEM CHURBYSAIL

SYSTEM CHURBYSAIL

OLIP SICURE TO COLUMN

SYSTEM CHURBYSAIL

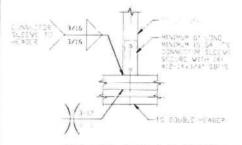
S PARTIES DATE TO THE STATE POST A SIGNAL STATE OF DOOR OF THE CONTROL OF THE CONTROL OF THE CANADA OF THE CONTROL TS HEADER BASE

7

COLUMN TO HEADER, BASE RAIL, DR WINDOW RAIL CONNECTION DETAIL

3716 MINIMUM 6" LENG, MINIMUM 15 54. TS SERVE SEEVE SECURE EACH WITH (A) #12-14-374" SDE'S TS COLUMN

DOUBLE HEADER/COLUMN CONNECTION DETAIL 8



6A

COLUMN/DOUBLE HEADER CONNECTION DETAIL 9



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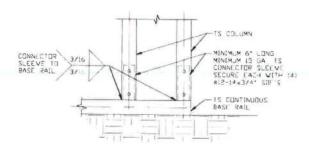
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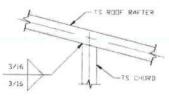
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CHECKED BY: PDH	LAKE CITY, FLORIDA 32025				
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JDB ND 16022S/ 17300S/20352S		
CLIENT: TBS	SHT. 12	DWG, ND: SK-3	REV. 6		

## CONNECTION DETAILS



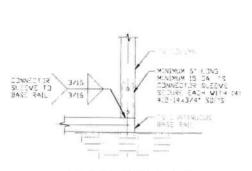


C COLLAR TIE

10 COLUMN/BASE RAIL CONNECTION DETAIL

RAFTER TO CHORD CONNECTION DETAIL

12 CONNECTION DETAIL



13 COLUMN/BASE RAIL
CONNECTION DETAIL

TS TRUSSED RAFTER
CHORD OR HEADER

IS AND COLUMN
JR DOOR WINDOW
RRAME BOST
IS HEADER, BASE
SALE OR VINDOW
RAIL OR VINDOW
RAIL
RAIL OR VINDOW
RAIL

COLUMN TO HEADER, BASE RAIL CONNECTION DETAIL

14



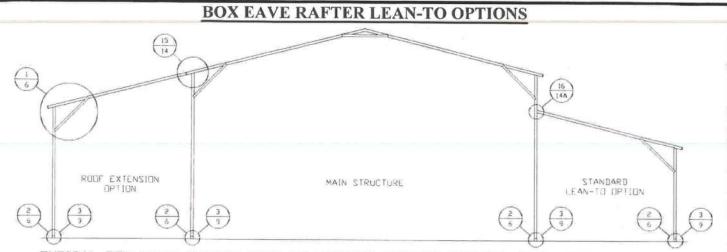
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PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND 1602257 005/203525	
CHECKED BY PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
DRAWN BY: JG	631 SE INDUSTRIAL CIRCLE				

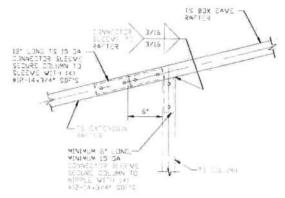


## TYPICAL BOX EAVE RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

SCALE: NTS

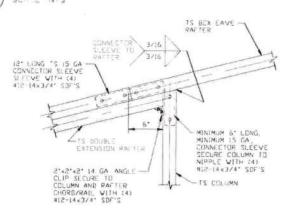
MAIN BUILDING COLUMNS WITH LEAN-TO DR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE LACED COLUMNS FOR MAIN BUILDING COLUMNS WITH LEAN-TO DR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR MAIN BUILDING COLUMNS WITH LEAN-TO DR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS 13'-J' < TO < 13'-J' FOR HIGH WIND) (WITH 4'-4' INSERT)

MAIN BUILDING COLUMNS WITH LEAN-TO DR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS 13'-J' < TO < 13'-J' FOR HIGH WIND) WHEN LEAN-TO'S ARE ADDED.



SIDE EXTENSION RAFTER/COLUMN DETAIL

FOR RAFTER SPANS & 15'-0'



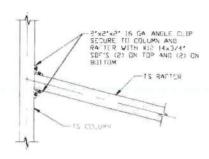
SIDE EXTENSION RAFTER/COLUMN DETAIL FOR RAFTER SPANS 15'-0" < TO < 24'-0"



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# **BOX EAVE RAFTER LEAN-TO OPTIONS**



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS ≤ 15'-0"

16

22.42.42.14 GA ANGLE CLIP
SECURE TO COLUMN AND
SATES WITH 1/4.43/4. SDF
GP ON TOP AND GP ON
BOTTOM

15 DOUBLE RAFTER

15 COLUMN

LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 15'-0" < TO ≤ 24'-0"

SCALE NTS

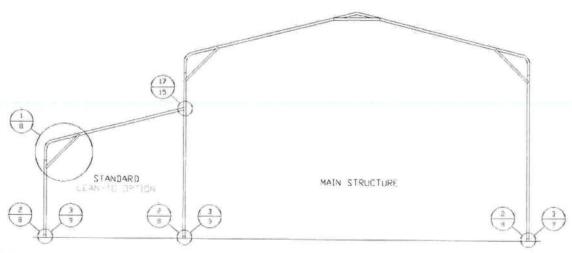
16A



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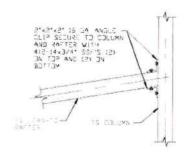
# **BOW RAFTER LEAN-TO OPTIONS**



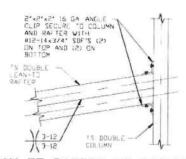
## TYPICAL BOW RAFTER LEAN-TO OPTIONS FRAMING SECTION (BOTH OPTIONS SHOWN)

MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE DOUBLE COLUMNS FOR MAIN BUILDING COLUMNS WITH LEAN-TO OR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS 13'-3' ( TO & 13'-3' GP'-3' FOR HIGH WIND) ( WITH 4'-4' INSERT)

MAIN BUILDING COLUMNS WITH LEAN-TO UR ROOF EXTENSION ATTACHED ARE REQUIRED TO BE SINGLE COLUMNS FOR EAVE HEIGHTS & 10'-3' ( TO & 13'-3' FOR HIGH WIND) WHEN LEAN-TO'S ARE ADDED



LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS & 15'-0"

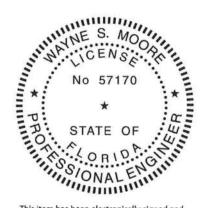


LEAN-TO RAFTER TO RAFTER COLUMN CONNECTION DETAIL FOR RAFTER SPANS 15'-0' < TO \( \) 24'-0'

SCALE: NTS

17

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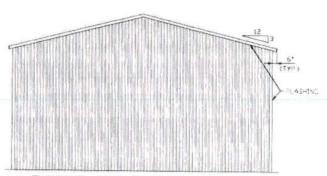
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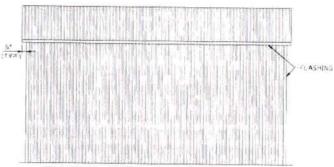
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DRAWN BY: JG	63	ULAR BUILDIN I SE INDUSTRI	AL CIR	RCLE	
CHECKED BY: PDH	LAKE CITY, FLORIDA 32025 30'-0"x20'-0" ENCLOSED BUILDING EXP. B				
PROJECT MGR: WSM	DATE: 7-29-21			ND: 160225/ 005/203525	
CLIENT: TBS	SHT. 15	DWG. ND: SK-3	9	REV. 6	

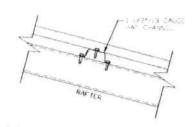
# BOX EAVE RAFTER VERTICAL ROOF/SIDING OPTION



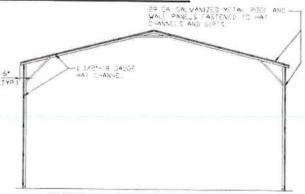
TYPICAL END ELEVATION VERTICAL ROOF/SIDING OPTION



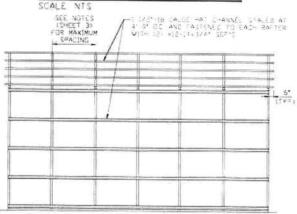
TYPICAL SIDE ELEVATION VERTICAL ROOF/SIDING OPTION



ROOF PANEL ATTACHMENT
CALTERNATE FOR VERTICAL ROOF PANELSX
SCALE NTS



# TYPICAL SECTION VERTICAL ROOF/SIDING OPTION



# TYPICAL FRAMING SECTION VERTICAL ROOF/SIDING OPTION

SCALE N'S NOTE IS WALL GIRTS CAN BE USED AS AN OPTION IN PLACE OF HAT CHANNELS IS SIRTS MUST BE SHATO AT 41-3.



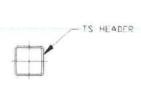
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CHECKED BY PDH			BUILDING EXP. B		
PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS	JDB ND: 16022S/ 17300S/20352S		
CLIENT: TBS	SHT. 16	DVG. ND SK-3	REV. 6		

# SIDE WALL HEADER OPTIONS



3/16 TYP

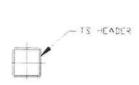
HEADER DETAIL FOR DOOR OPENINGS ≤ 10'-0"

STALT: NES

HEADER DETAIL FOR DOOR OPENINGS 10'-0" < LENGTH ≤ 15'-0"

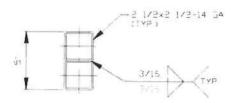
SCALE NTS

## END WALL HEADER OPTIONS



HEADER DETAIL FOR DOOR OPENINGS ≤ 12'-0"

SCALE NTS



HEADER DETAIL FOR DOOR OPENINGS 12'-0" < LENGTH ≤ 15'-0"

SCALE NTS



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CHECKED BY: PDH		E CITY, FLORIDA 32025 'ENCLOSED BUILDING EXP. B
	Total Control of the	JDB ND: 16022S/

PROJECT MGR: WSM DATE: 7-29-21 SCALE: NTS JOB NO: 160225/
173005/203525

CLIENT: TBS SHT. 17 DWG. NO: SK-3 REV.: 6

# FLOOD VENT DETAIL FRAME OPENING FOR FLOOD VENT WITH IS 2 1/2"x2 1/2" MEMBERS (MATCH ADJACENT RAFTER POSTS AND BASERAIL) 1/2"-18S OR F EXPANCED METAL ATTACH W/ McNICHOLS SQUARE FASTENERS OR APPROVED EQUAL AT 6" D.C. ATTACH W/ METAL TEK SCREWS PUST TS BASE BOVE BOVE RAIL GRADE GRADE

TYPICAL FLOOD VENT DETAIL

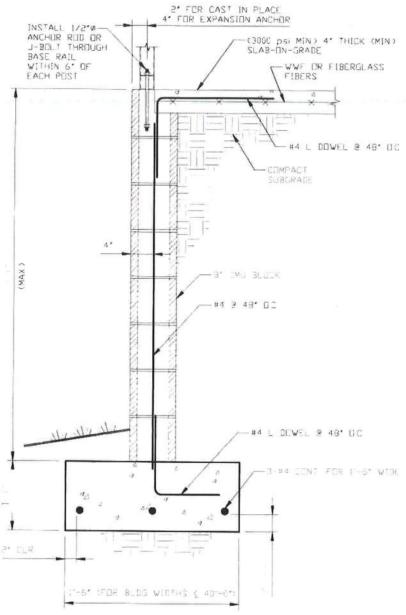
- I MINIMUM VENT SPACE REQUIRES = 1 SQ INCH OF OPEN WENT AREA PER SQ FEDT OF BUILDING AREA
- 2 THERE SHALL BE A MINIMUM OF TWO OPENINGS ON DIFFERENT SIDES FOR EACH ENCLOSED BUILDING.
- 3 APPLY 13 FACTOR WHEN CALCULATING TOTAL OPEN AREA WHEN USING 1/2" 18GA S OR F EXPANDED METAL.
- A TOTAL OPEN AREA OF MENT = LXH(MIN 18")
- 5 FLOOD VENT DETAIL COMPLIES WITH FEMALIFIE
- S PREFABRICATED FLOOD VENTS MEETING THE REQUIREMENTS OF FEMALIFIE MAY BE USED



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## STAND -ALONE STEM WALL DETAIL



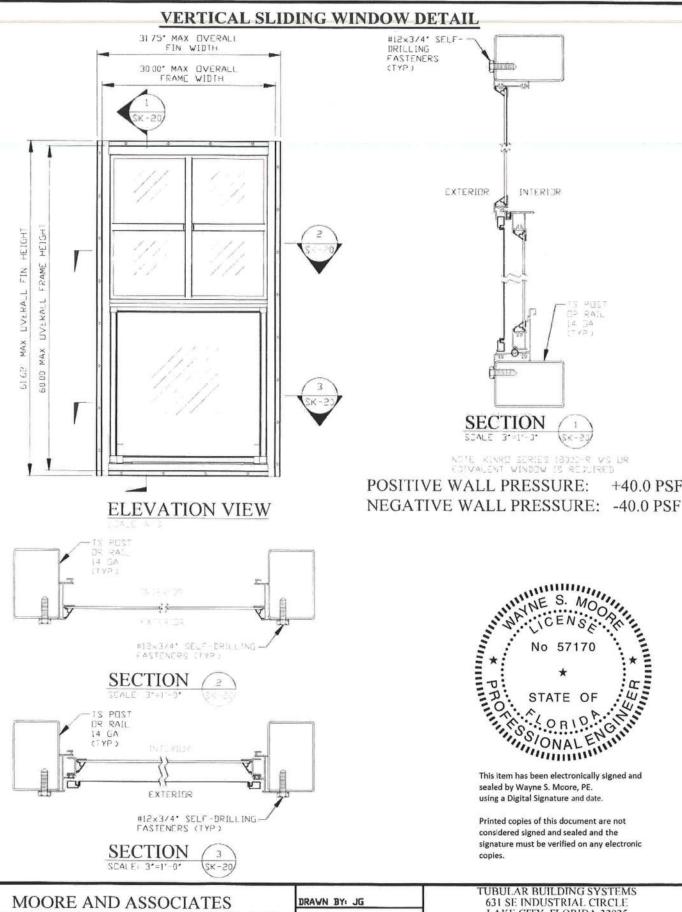
STAND-ALONE CONCRETE MASONRY UNIT (CMU) FOUNDATION STEM WALL DETAIL

SCALE: NTS



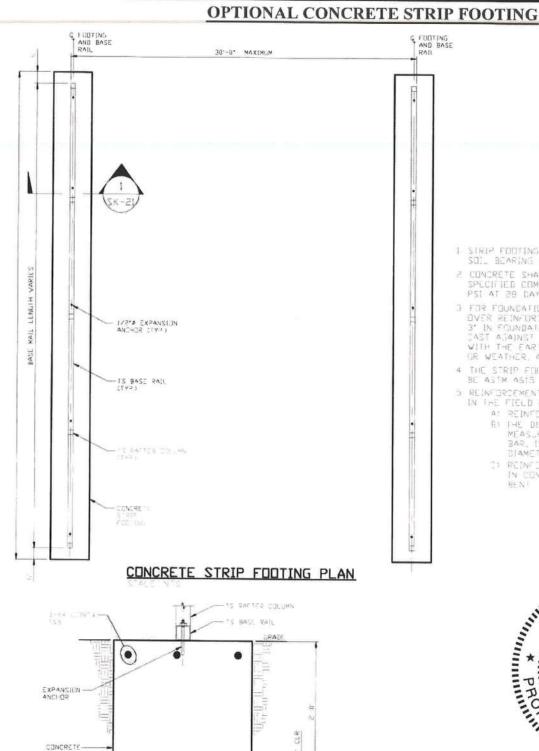
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+40.0 PSF

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ENGINEEDING AND CONCLUTING INC	CHECKED BY PDH		KE CITY, FLORID 0" ENCLOSED BU	
MOORE AND ASSOCIATES	DRAWN BY: JG		I SE INDUSTRIAL	



- I SIRIP FOOTING DESIGN BASED IN MINIMUM SOLL BEARING CAPACITY OF 1,500 PSF
- 2 CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS
- 3 FOR FOUNDATIONS MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE PER ACT-318-3' IN FOUNDATIONS WHERE THE CONCRETE IS CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE EARTH OR EXPOSED TO THE EARTH OR WEATHER, AND I 1/2' ELSEWHERE
- 4 THE STRIP FOOTING REINFORGING STEEL SHALL BE AS M ASIS GRADE 53
- BELASTM ASIS HADE S.)

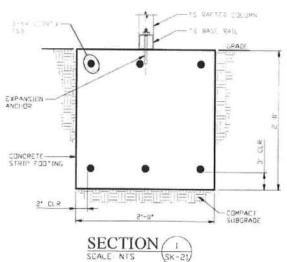
  REINFORCEMENT MAY SE BENT IN THE SHOP OR IN THE FIELD PROVISED

  A: REINFORCEMENT IS BENT COLD

  B: THE DIAMETER OF THE BEND.

  MEASURED ON THE INSIDE OF THE BAR. IS NOT LESS THAN SIX-BAR.

  DIAMETERS
  - C) REINFORCEMENT PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD



\* COURDINATE WITH LOCAL CODES/ORD

STATE OF WAR

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PROJECT MGR: WSM	DATE: 7-29-21	SCALE: NTS		ND: 160225/ 005/203525
CLIENT: TBS	SHT. 21	DWG, NO SK-3		REV. 6



# **Florida Product Approval Codes**

Roll-Up Doors:

Janus International Corporation Model 3652: 14425.1

EXP 12/31/2023

Walk-In Door:

Elixir Door & Metal Company blank (no window): 17996.5

EXP 08/26/2025

Roof Deck:

Capital Metal Supply Inc. Ag Panel: 20147.2

EXP 03/04/2025

Wall Panel:

Capital Metal Supply Inc. Ag Panel: 20148.2

Advanced Aluminum Dutch Lap Wall Panel: 31737.1

EXP 03/04/2025 EXP 12/31/2023

If you have any questions on concern, please contact Donald Little at 386-961-0006 or at tubularbuildingsystems@gmail.com.